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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,279	12/18/2001	Heyun H. Liu	135817	9794

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EXAMINER

SCHEIBEL, ROBERT C

ART UNIT PAPER NUMBER

2666

DATE MAILED: 08/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/026,279

Applicant(s)

LIU, HEYUN H.

Examiner

Robert C. Scheibel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - In line 21 of page 8, "In also contains" should be changed to "It also contains".

Appropriate correction is required.

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Drawings

3. The drawings are objected to because there are 2 bursts labeled "burst 2" in figure 32. The first one should be changed to "burst 1". Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

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drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Double Patenting

4. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

5. Claims **1-21** are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-21 of copending Application No. 09/795,374 (Publication Number 2002/0149820). This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims **1-4, 6-11, 13-18, and 20-21** are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,678,474 to Masuda et al.

Based on the very *broad* language of the claims as currently presented, Masuda discloses all the limitations of the claims as follows.

Regarding claim **1** Masuda discloses a method of communicating information in an optical burst switched network, comprising the steps of: transmitting multiple channels (the aggregation flows) of information over an optical transmission medium (the wavelength path 18 of Figure 10); for each channel: transmitting data bursts as series of one or more data slots (see packets pkt1, pkt2, and pkt4 in Figure 10); transmitting groups of control headers in a control slot (the lightwave adaptation frame header 403 – see figure 6 for example), each of said control headers containing routing information for a data burst (aggregated flow label 405) in the same channel (the adaptation frame header is transmitted in the same channel (adaptation flow)). Similarly, Masuda discloses the limitations of claims **8 and 15** with the same teachings cited above.

Regarding claims **2, 9, and 16**, Masuda discloses the limitation that each control header precedes its associated data burst by at least a predetermined minimum time

(the adaptation frame header precedes all of the packets in the superframe and as such precede them by a predetermined minimum amount).

Regarding claims **3, 10, and 17**, Masuda discloses the limitation that each of the control headers precedes its associated data burst by no more than a predetermined maximum time (Masuda includes multiple packets in an aggregation flow only if the packets have a length less than a fixed length (see lines 15-16 of column 3 for example; this means that there is an upper limit on the number of bytes (and thus the amount of associated transmission time) between the adaptation frame header and the start of the last packet in the adaptation frame).

Regarding claims **4, 11, and 18**, Masuda discloses the limitation that said data and control slots are arranged in one or more superframes (as indicated in lines 24-26 of column 10, the adaptation frame is a superframe).

Regarding claims **6, 13, and 20**, Masuda discloses the limitation that a control slot can be placed in an arbitrary slot position within a superframe (the control slot (adaptation frame header) is arbitrarily placed at the start of the superframe).

Regarding claims **7, 14, and 21**, Masuda discloses the limitation that for a particular channel, control slots are placed at regular intervals (the control slots (adaptation header) are at the start of each superframe; see figure 17).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims **5, 12, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,678,474 to Masuda et al in view of U.S. Patent 6,757,979 to Banks et al.

Masuda discloses the limitations of the parent claims 4, 11, and 18 as explained in the rejection under 35 U.S.C. 102 (e) above. Masuda does not disclose expressly the limitations of claims 5, 12, and 19 that a burst may span two or more superframes. Banks teaches fragmenting an IP packet into a plurality of IP packet fragments in lines 42-48 of column 6. This discloses the limitation that a burst may span two or more superframes as follows. In the rejection above, a packet is a burst. If a large packet were fragmented as taught by Banks, the burst (packet) would span multiple superframes as each fragment would be transmitted in successive superframes. Masuda and Banks are analogous art because they are from same field of endeavor of packet switching. At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Masuda to use IP packet fragmentation to break large packets into smaller fragments. The motivation for doing so would have been to allow the IP packet to be small enough to traverse a particular network segment as suggested by Banks in lines 46-48 of column 6. Therefore, it would have been obvious to combine Banks with Masuda for the benefit of creating IP packet fragments small enough to traverse a particular network segment to obtain the invention as specified in claims 5, 12, and 19.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents 6,111,673 and 6,545,781, disclose optical burst switching techniques whereby the header is sent in-band with the data (see Figure 2). U.S. Patent 6,724,996, and U.S. Patent Application Publication 2003/0016692 disclose superframe structures similar to that of the present invention. The cited articles by Chen et al, Hudek et al, Qiao, Listanti et al, Turner, and Shieh et al disclose various aspects of the state of the art in optical burst switching technology.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert C. Scheibel whose telephone number is 703-305-9062. The examiner can normally be reached on 6:30-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached on 703-308-5463. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



FRANK DUONG
PRIMARY EXAMINER

RCS 8-2-04
Robert C. Scheibel
Examiner
Art Unit 2666